# SEMPARIS – Séminaires en région parisienne

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## Seminaire exceptionnel

**Mercredi 9 Juillet 2025, 17 :00**
LPNHE, Amphitheatre 15, Sorbonne Université, Campus Jussieu( 17h, café à partir de 16h30 )
Domaines : physics

Titre : *Bridging High and Low Energies in Search of Quantum Gravity*

Orateur : **Giulia Gubitosi ( Associate Professor, Université de Naples, INFN, Chair of COST Action BridgeQG )**

Résumé : *The interplay between quantum mechanics and general relativity is one of the most profound open problems in fundamental physics. After decades of purely theoretical investigations, recent experimental advances turned the prospect of a phenomenological approach into a realistic possibility. On the one hand, searches for quantum gravity effects in astrophysical signals constitute nowadays an established field of fundamental research. On the other hand, table-top experiments with quantum systems are now advancing fast towards understanding the role of gravity in quantum systems and testing the possibility that gravity itself is quantized. Investigating the interface between high-energy quantum gravity and quantum aspects of gravity in the low-energy regime, using both theoretical and experimental tools, can provide complementary clues towards the construction of a phenomenologically viable theory of quantum gravity at all scales. In this talk, I will give an overview of the state of the art and key open questions of this research programme and describe the related activities of the COST Action BridgeQG (Bridging high and low energies in search of quantum gravity).*

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